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EXAMINER

ZERVIGON, RUDY

ART UNIT PAPER NUMBER

1763

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/807,589	Applicant(s) PRETI ET AL	
	Examiner Rudy Zervigon	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-16 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 15, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, and 4-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conger, Darrell R. (US 4,761,269 A) in view of Tomoyasu, Masayuki et al. (US 5,888,907 A) and Pozzetti, V et al (EP 415191 A). Conger, Darrell R. et al teaches a reaction chamber (Figure 5; column 7, line 48-68) comprising a belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) made of insulating and transparent material, such as quartz, a susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) provided with disk-shaped cavities (holding substrates 14; Figure 5; column 5, line 54 - column 6, line 14) for receiving wafers (14; Figure 5; column 5, line 54 - column 6, line 14) of material to be treated and having an insulating and chemically resistant plate (lower portion of "quartz dome" above 114; Figure 5; column 5, line 54 - column 6, line 14) arranged above it, characterized by using: a diffuser (16; Figure 2,5; column 5, line 54 - column 6, line 14; column 7, lines 49-68) formed by a cap (16; Figure 2;

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column 5, line 54 - column 6, line 14) supplied by a central dome-piece (28; Figure 2; column 5, line 54 - column 6, line 14) connected to a symmetrical annular distribution chamber (80; Figure 2; column 5, line 54 - column 6, line 14) – claim 1. Applicant's claim 1 requirement of "Improved reaction chamber for an epitaxial reactor" is an intended use claim requirement. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP2111.02).

Conger further teaches:

- i. Conger's cylindrical zone (upper portion of 112) of Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) extended above Conger's plate (lower portion of "quartz dome" above 114; Figure 5; column 5, line 54 - column 6, line 14) supported above Conger's susceptor (114; Figure 5) so as to eliminate any interference between Conger's plate (lower portion of "quartz dome" above 114; Figure 5; column 5, line 54 - column 6, line 14) and shoulder (curved upper portion of 112; Figure 5); a minimum internal diameter of Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) so as to keep Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) as far away as possible from Conger's susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) – claim 1

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- ii. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 1, characterized in that Conger's cap (16; Figure 2; column 5, line 54 - column 6, line 14) of Conger's diffuser (16; Figure 2,5; column 5, line 54 - column 6, line 14; column 7, lines 49-68) is fixed to Conger's annular flange (lowest portion of 16; Figure 2) which is in turn fixed to Conger's (upper-most portion of 12; Figure 2) of Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) by means of Conger's pair of two half counter-flanges (128; Figure 5) gripping Conger's annular flange (lowest portion of 16; Figure 2) against Conger's upper flange (16/112 interface; Figure 5) of Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14), as claimed by claim 2
- iii. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 2, characterized in that Conger's cap (16; Figure 2; column 5, line 54 - column 6, line 14) is closed at Conger's top by a flange (28/16 interface; Figure 2) terminating in Conger's dome-piece (28; Figure 2; column 5, line 54 - column 6, line 14) communicating with Conger's sleeve (horizontal portion of 28; Figure 2; column 5, line 54 - column 6, line 14) for connection to Conger's external source of gas (56/36; Figure 1; column 5, line 54 - column 6, line 14) to be used in Conger's same reaction chamber (Figure 5; column 7, line 48-68), which dome-piece is provided with Conger's bottom (piece above 86; Figure 2; column 5, line 54 - column 6, line 14) defining at least one circular slit (88; Figure 2) for ensuring Conger's rigorously uniform distribution of gas to Conger's annular chamber (80; Figure 2; column 5, line 54 - column 6, line 14) – claim 4

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- iv. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 4, characterized in that, in addition to Conger's slit (88; Figure 2) in Conger's bottom (piece above 86; Figure 2; column 5, line 54 - column 6, line 14), Conger's further annular slit (88; Figure 2) helps ensure Conger's uniform distribution of gas to Conger's annular chamber (80; Figure 2; column 5, line 54 - column 6, line 14) – claim 5

Conger does not teach:

- i. Conger's symmetrical annular distribution chamber (80; Figure 2; column 5, line 54 - column 6, line 14) has a plurality of pipes of the same length which connect Conger's annular chamber (80; Figure 2; column 5, line 54 - column 6, line 14) of Conger's cap (16; Figure 2; column 5, line 54 - column 6, line 14) to Conger's dome zone (112; Figure 5) of Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) situated just underneath Conger's neck (upper portion of 112; Figure 5; column 5, line 54 - column 6, line 14) connecting Conger's upper flange (16/112 interface; Figure 5) to Conger's dome (112; Figure 5) – claim 1
- ii. the plurality of pipes ensuring a uniform distribution of flow at a lower speed – claim 1
- iii. on Conger's corners of Conger's susceptor (114; Figure 5; column 5, line 54 - column 6, line 14), in its upper zone, projecting baffles inserted into recesses formed in Conger's body of Conger's susceptor (114; Figure 5; column 5, line 54 - column 6, line 14), the baffles having a length about half that of the corners of Conger's susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) – claim 1

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- iv. a plurality of pipes emerging from Conger's distributor (16; Figure 2; column 5, line 54 - column 6, line 14) inside Conger's belljar (112; Figure 5) – claim 4
- v. outlet pipes – claim 5
- vi. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 4, characterized in that Conger's cap (16; Figure 2; column 5, line 54 - column 6, line 14) of Conger's distributor (16; Figure 2; column 5, line 54 - column 6, line 14) comprises an internal chamber for a flow of a cooling fluid – claim 6
- vii. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 4, characterized in that outlet pipes are made of a material which is chemically inert with respect to a gas used in Conger's belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14) - claim 7
- viii. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 7, characterized in that said outlet pipes are made of glass, as claimed by claim 8
- ix. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 7, characterized in that said outlet pipes are made of ceramic material, as claimed by claim 9
- x. Reaction chamber (Figure 5; column 7, line 48-68) for Conger's epitaxial reactor, according to Claim 7, characterized in that said outlet pipes are made of quartz, as claimed by claim 10
- v. A Reaction chamber (Figure 5; column 7, line 48-68), according to Claim 1, characterized in that baffles fixed to Conger's susceptor (114; Figure 5; column 5, line 54

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- column 6, line 14) are made of material chemically inert with respect to Conger's gases used in Conger's Conger's chamber, as claimed by claim 11

Tomoyasu, Masayuki et al teaches:

- xi. symmetrical annular distribution chambers (62, 44a-d; Figure 1) has a plurality of pipes (46, 64; Figure 1) of the same length which connect Tomoyasu's annular chamber (62, 44a-d; Figure 1) of Tomoyasu's cap (42) to Tomoyasu's dome zone (4) of Tomoyasu's – claim 1
- xii. the plurality of pipes ensuring a uniform distribution of flow at a lower speed - Applicant's claim 1 requirement of "...the plurality of pipes ensuring a uniform distribution of flow at a lower speed..." is an intended use claim requirement. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02). The Examiner argues that there is no structural difference between the claimed invention's symmetrical annular distribution chambers with a plurality of pipes and the prior art symmetrical annular distribution chambers with a plurality of pipes
- xiii. a plurality of pipes (46, 64; Figure 1) emerging from Tomoyasu's distributor (30) inside Tomoyasu's reactor (4; Figure 1) – claim 4

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- xiv. outlet pipes (46, 64; Figure 1) – claim 5
- xv. Reaction chamber (4; Figure 1) for Tomoyasu's reactor, according to Claim 4, characterized in that Tomoyasu's cap (42) of Tomoyasu's distributor (30) comprises an internal chamber (82) for a flow of a cooling fluid – claim 6
- xvi. Reaction chamber (4; Figure 1) for Tomoyasu's reactor, according to Claim 4, characterized in that outlet pipes (46, 64; Figure 1) are made of a material which is chemically inert ("aluminum covered with the anodized surface"; column 5, lines 53-58) with respect to a gas used in Tomoyasu's reactor - claim 7
- xvii. Reaction chamber (4; Figure 1) for Tomoyasu's reactor, according to Claim 7, characterized in that said outlet pipes (46, 64; Figure 1) are made of glass ("aluminum covered with the anodized surface" – Al_2O_3 ; column 5, lines 53-58), as claimed by claim 8
- xviii. Reaction chamber (4; Figure 1) for Tomoyasu's epitaxial reactor, according to Claim 7, characterized in that said outlet pipes (46, 64; Figure 1) are made of ceramic material ("aluminum covered with the anodized surface" – Al_2O_3 ; column 5, lines 53-58), as claimed by claim 9

Pozzetti teaches:

- xix. a susceptor (132; Figure 8) projecting baffles (147a-f; Figure 8) inserted into recesses (146a-f/147a-f interfaces) formed in a body of the susceptor (132; Figure 8), the baffles having a length (compare Figure 1 of Applicant's invention with Figure 8 of Pozzetti) about half that of the corners of the susceptor – claim 1

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- xx. A Reaction chamber (12; Figure 1), according to Claim 1, characterized in that baffles (147a-f; Figure 8) fixed to Pozzetti's susceptor (132; Figure 8) are made of material chemically inert with respect to Pozzetti's gases used in Pozzetti's chamber, as claimed by claim 11. Applicant's claim 11 requirement of "are made of material chemically inert with respect to gases used in the chamber" is an intended use claim requirement. Further, it has been held that claim language that simply specifies an intended use or field of use for the invention generally will not limit the scope of a claim (Walter , 618 F.2d at 769, 205 USPQ at 409; MPEP 2106). Additionally, in apparatus claims, intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim (In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto , 136 USPQ 458, 459 (CCPA 1963); MPEP 2111.02).
- vi. A Reaction chamber (12; Figure 1), according to Claim 1, characterized in that baffles (147a-f; Figure 8) fixed to Pozzetti's susceptor (132; Figure 8) are made of material chemically inert (column 8, lines 18-22) with respect to Pozzetti's gases used in Pozzetti's chamber, as claimed by claim 11

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Conger to add a plurality of pipes of the same length as taught by Tomoyasu, replace Conger's susceptor with Pozzetti's susceptor having projecting baffles inserted into recesses formed in Pozzetti's body of Pozzetti's susceptor as taught by Pozzetti, add an internal chamber to Conger's distributor for a flow of a cooling fluid as taught by Tomoyasu, and dimension Conger's chemically resistant plate to be partially flat.

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Motivation for Conger to add a plurality of pipes of the same length as taught by Tomoyasu is for uniform process gas application as taught by Tomoyasu (column 8, lines 22-32), replace Conger's susceptor with Pozzetti's susceptor having projecting baffles inserted into recesses formed in Pozzetti's body of Pozzetti's susceptor as taught by Pozzetti is for maintaining uniform film growth across process wafers as taught by Pozzetti (column 7, lines 37-40), add an internal chamber to Conger's distributor for a flow of a cooling fluid as taught by Tomoyasu is for maintaining the process gases at a predetermined temperature as taught by Tomoyasu (column 6, lines 55-67), and motivation to dimension Conger's chemically resistant plate to be partially flat is for optimizing Conger's gas flow as taught by Conger (abstract). Further, it is well established that changes in apparatus dimensions are within the level of ordinary skill in the art. (Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); See MPEP 2144.04)

4. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conger, Darrell R. (US 4,761,269 A), Tomoyasu, Masayuki et al. (US 5,888,907 A), Pozzetti, V et al (EP 415191 A) in view of Wu, Robert W. (US 5,910,221 A). Pozzetti further teaches graphite as a material for Pozzetti's susceptor (column 8, lines 4-6). None of Conger, Tomoyasu, and Pozzetti teach:

- vii. Reaction chamber (12; Figure 1) for Pozzetti's reactor, according to Claim 11, characterized in that the baffles are (147a-f; Figure 8) fixed to Pozzetti's susceptor (132; Figure 8) are made of ceramic material, as claimed by claim 13

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- viii. Reaction chamber (12; Figure 1) for Pozzetti's epitaxial reactor, according to Claim 11, characterized in that the baffles (147a-f; Figure 8) fixed to Pozzetti's susceptor (132; Figure 8) are made of quartz, as claimed by claim 14
- ix. Reaction chamber (12; Figure 1) for Pozzetti's reactor, according to Claim 11, characterized in that the (147a-f; Figure 8) fixed to Pozzetti's susceptor (132; Figure 8) are made of graphite lined with silicon carbide, as claimed by claim 15

Wu teaches chemically inert materials including ceramics, quartz, and silicon carbide for reactor components in harsh chemical environments (column 1, lines 11-33; abstract)

It would have been obvious to one of ordinary skill in the art at the time the invention was made for Conger, Tomoyasu, and Pozzetti to replace their stated materials for the materials as taught by Wu.

Motivation for Conger, Tomoyasu, and Pozzetti to replace their stated materials for the materials as taught by Wu is for maintaining reactor chamber components inert to the processing environment as taught by both Pozzetti (column 8; lines 18-22) and Wu (abstract).

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Conger, Darrell R. (US 4,761,269 A) in view of Tomoyasu, Masayuki et al. (US 5,888,907 A). Conger, Darrell R. et al teaches a reaction chamber (Figure 5; column 7, line 48-68) for an epitaxial reactor comprising: a belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14); a susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) inside the belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14); and a diffuser (16; Figure 2,5; column 5, line 54 - column 6, line 14; column 7, lines 49-68) disposed on the top of the belljar ("quartz dome", 112; Figure 5; column 5, line 54 - column 6, line 14); the belljar ("quartz

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dome”, 112; Figure 5; column 5, line 54 - column 6, line 14) being made of insulating and transparent material and having an upper flange (16/112 interface; Figure 5), the flange joined to a neck (upper portion of 112; Figure 5; column 5, line 54 - column 6, line 14); the susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) comprising a body shaped like a truncated pyramid (compare with Applicant’s susceptor 32; Figure 1), the susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) being provided with disk-shaped cavities (holding substrates 14; Figure 5; column 5, line 54 - column 6, line 14) for receiving wafers of material to be treated, and supporting an insulating and chemically resistant plate (lower portion of “quartz dome” above 114; Figure 5; column 5, line 54 - column 6, line 14) above it, the plate (lower portion of “quartz dome” above 114; Figure 5; column 5, line 54 - column 6, line 14) facing the flat zone of the belljar (“quartz dome”, 112; Figure 5; column 5, line 54 - column 6, line 14); the diffuser (16; Figure 2,5; column 5, line 54 - column 6, line 14; column 7, lines 49-68) being formed by a cap (16; Figure 2; column 5, line 54 - column 6, line 14) supplied by a central dome-piece (28; Figure 2; column 5, line 54 - column 6, line 14) connected to a symmetrical annular distribution chamber (80; Figure 2; column 5, line 54 - column 6, line 14); wherein the internal diameter of the cylindrical zone of the belljar (“quartz dome”, 112; Figure 5; column 5, line 54 - column 6, line 14) is sized to keep the belljar (“quartz dome”, 112; Figure 5; column 5, line 54 - column 6, line 14) from the susceptor (114; Figure 5; column 5, line 54 - column 6, line 14) – claim 16.

Conger does not teach that Conger’s shoulder (curved upper portion of 112; Figure 5) is joined to a flat zone and a cylindrical zone joined to Conger’s shoulder (curved upper portion of 112; Figure 5). Conger does not teach that Conger’s plate (lower portion of “quartz dome” above 114;

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Figure 5; column 5, line 54 - column 6, line 14) is “flat”. Conger does not teach having a plurality of pipes of the same length which connect Conger’s annular chamber (80; Figure 2; column 5, line 54 - column 6, line 14) of Conger’s cap (16; Figure 2; column 5, line 54 - column 6, line 14) to a dome zone of Conger’s belljar (“quartz dome”, 112; Figure 5; column 5, line 54 - column 6, line 14) situated just underneath its neck (upper portion of 112; Figure 5; column 5, line 54 - column 6, line 14), the plurality of pipes feeding gases into Conger’s belljar (“quartz dome”, 112; Figure 5; column 5, line 54 - column 6, line 14) and ensuring a uniform distribution of gas flow at a lower speed.

Tomoyasu teaches Tomoyasu’s shoulder (32; Figure 1) is joined to a flat zone (horizontal 32/4 interface) and a cylindrical zone (vertical 32/4 interface) joined to Tomoyasu’s shoulder (32; Figure 1). Tomoyasu teaches that Tomoyasu’s plate (40) is “flat”. Tomoyasu teaches having a plurality of pipes (46, 64; Figure 1) of the same length which connect Tomoyasu’s annular chamber (62, 44a-d; Figure 1) of Tomoyasu’s cap (42) to a dome zone of Tomoyasu’s reactor situated just underneath its neck (flange portion of 42), the plurality of pipes feeding gases into Tomoyasu’s reactor (4) and ensuring a uniform distribution of gas flow at a lower speed.

Allowable Subject Matter

6. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art teach or suggest “fixing of the cap of the diffuser to the annular flange is performed by means of a plurality of spring-loaded tie-rods which push in an elastic manner to the cap against the annular flange”.

Response to Arguments

7. Applicant's arguments filed March 15, 2005 have been fully considered but they are not persuasive.

8. Applicant bases his traverse on the opinion that the cited prior art references are nonanalogous. However, as stated before, the Examiner maintains his rejection on the very grounds that the references are in the field of applicant's endeavor (gas distribution in wafer processing chambers) and are then be reasonably pertinent to the particular problem with which the applicant was concerned (uniform processing). As a result, the Examiner believes the prior art reference are both in the field of applicant's endeavor and are reasonably pertinent to the particular problem with which the applicant was concerned – uniform gas distribution in film deposition apparatus. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

9. In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

10. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

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11. The remainder of Applicant's arguments are centered on newly added claim 16. Said arguments are addressed above in the body of the rejected claim.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: US 6,080,241 A

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Rudy Zervigon whose telephone number is (571) 272.1442. The examiner can normally be reached on a Monday through Thursday schedule from 8am through 7pm. The official fax phone number for the 1763 art unit is (703) 872-9306. Any Inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Chemical and Materials Engineering art unit receptionist at (571) 272-1700. If the examiner can not be reached please contact the examiner's supervisor, Parviz Hassanzadeh, at (571) 272-1435.

Rudy Zervigon
6/10/5